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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,501	01/08/2004	Shoji Ichinohe	4710-0105P	5138
2292	7590	03/14/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/752,501

Applicant(s)

ICHINOHE, SHOJI

Examiner

Kuo-Liang Peng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 5/5/04 IDS.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7 is/are rejected.  
7) ☒ Claim(s) 1-7 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/8/04, 5/5/04.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-7 are objected to because of the following informalities:

In Claim 1 and 7, should “characterized in that” be -- wherein --?

Claims 5-6 (when Claim 6 depends on Claim 5) are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In Claim 5 (lines 4-5), “at least one end thereof” is not supported in Claim 1 wherein “an end” of a silicone is modified.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1 (line 7), " $1 \leq x+y$ " causes confusion because  $x+y$  cannot be 0.

Otherwise the silicone chain is not modified.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichinohe (US 5 288 831).

For Claims 1 and 5, Ichinohe discloses a purified polyether silicone addition reaction products of a hydrogen siloxane and a polyoxyalkylene containing a terminal double bond in the presence of a platinum catalyst, which in unpurified form contains one or both of unreacted polyoxyalkylene and internal rearrangement side reaction products thereof which generate unpleasant odors in the reaction product upon storage and upon contact with water, substantially free from said unreacted polyoxyalkylene and rearrangement products thereof so that the total quantity of ketones and aldehydes produced by a treatment of the purified

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polyether silicones in a closed system at 60°C. for 24 hours with a quantity of  $10^{-4}$  N aqueous hydrochloric acid equivalent to the quantity of said polyether silicones, is no greater than 1,000 ppm of said polyether silicones, which purified polyether silicones are obtained by treating the unpurified form thereof with water, an aqueous solution of pH no greater than 7 or an acidic material, until substantially all of the odorous substances are produced and then removing the odorous substances therefrom. The polyether silicones can be an organopolysiloxane containing a polyoxyalkylene group represented by the formula (VI) or formula (VII). (Abstract, col. 3, lines 18-44 and Examples) For Claim 2, the polyoxyalkylenes are exemplified in Examples. For Claim 6, Ichinohe teaches a solvent formulation for hair care, etc., comprising the polyether silicone. Note that “for an electrolytic solution” is merely an intended use, and does not carry any weight of patentability. See MPEP 2111.02. For Claim 7, Ichinohe further teaches that the polyether silicone is subjected to vacuum distillation. (col. 6, lines 3-14)

5. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Petroff (EP 995 771).

For Claim 1, Petroff discloses a method of preparing a polyethersilicone that does not contain unreacted polyoxyalkylene by reacting compounds A) and B) in

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the presence of a catalyst C). Component B) can be 1,1,1,3,5,5,5-heptamethyltrisiloxane, 1,1,3,3-tetramethyldisiloxane, etc. ([0008]-[0022]) For Claim 4, Component B) can have a viscosity as low as 0.65 mm<sup>2</sup>/s. ([0022]) Component A) have a relative low molecular weight as exemplified in Examples. Thus, Examiner has a reasonable basis to believe that the resulting polyethersilicone should have a viscosity falling within the claimed viscosity range. For Claim 6, Petroff teaches an emulsion comprising a solvent and the polyether silicone. ([0009] and [0054]-[0055]) Note that “for an electrolytic solution” is merely an intended use, and does not carry any weight of patentability. See MPEP 2111.02.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinohe in view of Schilling (US 4 150 048).

Ichinohe discloses a purified polyether silicone addition reaction products, *supra*, which is incorporated herein by reference. For Claim 3, Ichinohe teaches the R' (a spacer between the polysiloxane and the polyoxyalkylene) in formulae (VI) and (VII) can be a bivalent hydrocarbon group. (col. 3, lines 18-44) The R' can be exemplified as a residue of an allyl group on the polyoxyethylenes.

(Examples) The difference between Ichinohe' spacer (R') and the spacer in the instant claim is that the latter has an additional methyl substituent on the spacer.

Note that Ichinohe genetically discloses the claimed spacer. Furthermore, Schilling teaches that the hydrosilylation reaction between a hydridopolysiloxane and an ethylenically unsaturated polyoxyalkylene proceeds more cleanly when the ethylenically unsaturated group is  $\text{CH}_2=\text{C}(\text{R})\text{CH}_2-$ . (col. 3, lines 1-34 and col. 5, lines 3-59) R can be a methyl group as exemplified in the methallyl-containing polyethers described in col. 7, lines 36-65 and Examples. In light of the benefit of using the methallyl-containing polyethers, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize a methallyl-containing polyether in Ichinohe's addition reaction in order to obtain a cleaner "crude product" before purification.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinohe.

Ichinohe discloses a purified polyether silicone addition reaction products, *supra*, which is incorporated herein by reference.

Ichinohe is silent on the polyether silicone having the specific viscosity set forth in the instant claim. However, Ichinohe teaches the use of the polyether silicone in the formulations for hair care, etc. (col. 4, lines 24-49) Note that the viscosity of the polyether silicone will affect the viscosity of the formulation. Therefore, the viscosity of the polyether silicone is a Result-Effective variable. In light of which, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize a polyether silicone having whatever viscosity through routine experimentation in order to afford a formulation with a desired viscosity.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.




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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp

March 4, 2005

  
**KUO-LIANG PENG**  
**PRIMARY EXAMINER**

Kuo-Liang Peng  
Primary Examiner  
Art Unit 1712